AMENDMENTS TO THE CLAIMS:

The listing of claims shown below will replace all prior versions, and listings, of claims in the Application:

1. (Original) A method for interacting an optical gradient field in three dimensions with a particle, comprising the steps of:

interfering two beams to generate a plurality of planar fronts,

providing a plurality of particles in a medium, and

moving the planar fronts relative to the particles,

whereby the particles are separated at least in part based upon the dielectric constant of the particles.

2. (Original) The method of claim 1 wherein the interfering of the two beams utilizes two separate beams.

3. (Original) The method of claim 1 wherein the interfering of the two beams utilizes a single source to generate the two beams.

4. (Original) The method of claim 3 wherein the two beams comprise a direct and reflected beam.

5. (Original) The method of claim 4 wherein the reflected beam is reflected at an oblique angle to the mirror.

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6. (Original) The method of claim 1 wherein the medium has a dielectric constant which is less than the dielectric constant of the particle.

7. (Original) The method of claim 1 wherein the planar front moves in a direction perpendicular to the interference planes.

8. (Original) The method of claim 1 wherein the planar fronts move through a volume.

9. (Original) The method of claim 1 wherein the particles and media are contained in a sample volume.

10. (Original) The method of claim 9 wherein the sample volume is a three dimensional volume.

11-20. (Cancelled)

21. (Previously Presented) The method of claim 1, wherein the particles are cells.

22. (Amended) A method of separating particles using an optical force gradient comprising the steps of:

providing a three-dimensional volume;

providing a plurality of particles in a medium;

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interfering two beams to generate a plurality of planar fronts within the three-dimensional volume, the plurality of planar fronts affecting differential force vectors on the particles so as to separate the particles, whereby the particles are separated at least in part based upon the dielectric constant of the particles.

23. (Previously Presented) The method of claim 22, wherein the particles are cells.

24. (New) The method of claim 22, wherein the interfering of the two beams utilizes two separate beams.

25. (New) The method of claim 22, wherein the interfering of the two beams utilizes a single source to generate the two beams.

26. (New) The method of claim 25, wherein the two beams comprise a direct and reflected beam.

27. (New) The method of claim 26, wherein the reflected beam is reflected at an oblique angle to the mirror.

28. (New) The method of claim 22, wherein the medium has a dielectric constant which is less than the dielectric constant of the particle.

29. (New) The method of claim 22, wherein the planar front moves in a direction perpendicular to the interference planes.

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30. (New) The method of claim 22, wherein the planar fronts move through a volume.

31. (New) The method of claim 22, wherein the particles and media are contained in a sample volume.

32. (New) The method of claim 31, wherein the sample volume is a three dimensional volume.

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